

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004217**Date Inspected:** 26-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower & OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

OBG Bay 1:

The QA Inspector randomly observed ZPMC welders Zhang Li Ping ID 201840/Zhao Cheng Suang ID 059400 (Weld Joint (WJ) Numbers 001/002), Song Yin Shu ID 059421/Zhang Shao Hei ID 059403 (WJ's 005/006) and Wang Xiao Rong ID 059445/Jiong Shuang Chen ID 201788 (WJ's 009/010), utilizing the Gas Metal Arc Welding (GMAW) Process in the 2G (Flat Groove) Position on Gantry 2 with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2342-U1(U-Rib)-4, to weld the root pass attaching U-Ribs U-446/U-251, U-151/U-162 and U-158/U-164 to Deck Plate DP227-001. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Sun Wei, monitoring weld parameters. The QA Inspector also randomly observed weld parameters and recorded them as follows: 371/374 amps, 31.2/31.6 volts for WJ's 001/002; 373/372 amps, 31/31 volts for WJ's 005/006 and 378/389 amps, 3.7/31.1 for WJ's 009/010 with a travel speed of 535 millimeters (mm) per minute for all the above listed WJ's. The weld parameters appeared to comply with contract requirements.

OBG Bay 2:

The QA Inspector randomly observed 5 ZPMC magnetic drill operators drilling bolt holes in OBG connection plates.

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OBG Bay 3:

The QA Inspector randomly observed ZPMC welder Xiao Di ID 203204, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112, to tack weld T-Ribs to Side Plate SP155-001 WJ's 014/013. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Sun Zuo Wen ID 048920, utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112, to tack weld T-Ribs to Side Plate SP127-001 WJ's 020/019. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Chen Chih Chian, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Xiao Lin ID 049485, utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112, to tack weld T-Ribs to Side Plate SP366-001 WJ's 022/021. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Chen Chih Chian, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

OBG Bay 4:

The QA Inspector randomly observed ZPMC welders Miao Yian Fei ID 066398, Li Zheng Xu ID 066179, Zhu Yao Chai ID 068250, utilizing the SMAW Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-3312-TC-P5 to tack weld 23M (W) Tower Diaphragm Web Plate p545 to Upper Diaphragm SA287. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Li Shuqiang ID 053609, utilizing the Flux Cored Arc Welding (FCAW) Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2332-TC-P4-F-1, to weld the upper and lower halves of 9M Single Tower Diaphragm Flange Plate Assembly piece marks at WJ SSD1-SA20-105. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

OBG Bay 7:

The QA Inspector randomly observed ZPMC welder Hu Yacheng ID 049339, utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112, to tack weld Flange X7F to Floor Beam Sub-Assembly FB009-015 at WJ 003. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Huang Wen Pang, monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

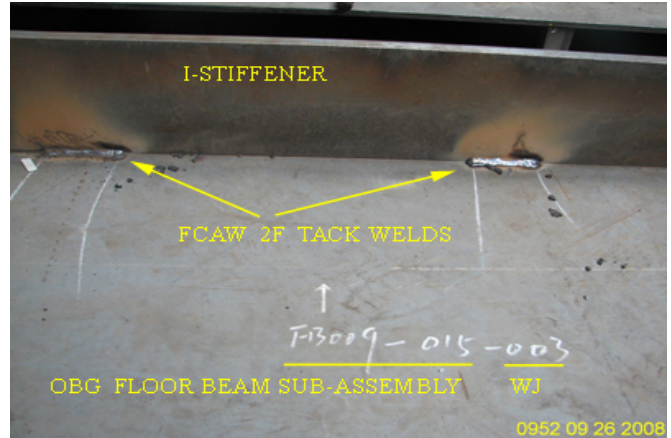
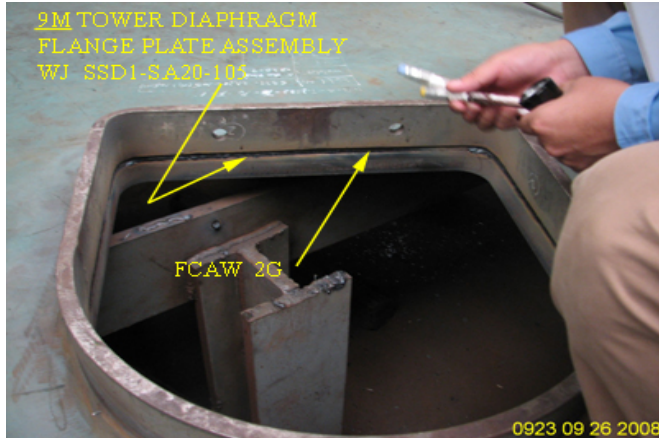
OBG Bay 8:

The QA Inspector randomly observed ZPMC welder Jiang Yong Sheng ID 045240, utilizing the FCAW Process in

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the 3F (Vertical Fillet) Position with ZPMC WPS WPS-B-T-2133, to weld the flange to Floor Beam Diaphragm FB072-001. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Hu Wei Qing, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 215 amps, 28 volts with a travel speed of 217 mm per minute. The weld parameters appeared to comply with contract requirements.



Summary of Conversations:

As noted in the above body of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Wright,Mark

QA Reviewer